

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-3 are pending in this case. Claims 1 and 2 are amended by the present amendment. Amended Claims 1 and 2 are supported by the original claims. Amended Claims 1 and 2 add no new matter.

The outstanding Office Action includes a requirement for an abstract, a rejection of Claims 1-3 under 35 U.S.C. §112, second paragraph, as being indefinite, and a rejection of Claims 1-3 under 35 U.S.C. §103(a) as unpatentable over Härtel (U.S. Patent No. 4,744,547) in view of Itsushi et al. (Japanese Patent No. 2936989, assigned to Hitachi Plant Eng. & Constr. Co. Ltd., hereinafter "Hitachi").

The outstanding Office Action stated that the present application did not include an abstract. Applicant believes an abstract was included on page 24 of the filed application. The included amendment to the abstract is made with respect to this originally filed abstract to remove the reference numbers therefrom.

With respect to the rejection of Claims 1-3 under 35 U.S.C. §112, second paragraph, Claims 1 and 2 are amended to clarify the subject matter claimed. Claims 1 now recites, "a vibration element configured to vibrate the mass member with a driving force generated by an input of a control pulse signal corresponding to vibration of a vibration generating source." The objected to phrase "same vibration means" has been deleted. Claim 2 has been clarified to recite "a control frequency of several kHz to several tens of kHz." Accordingly, applicant respectfully submits that Claims 1-3 are in full compliance with all requirements under 35 U.S.C. § 112, second paragraph.

With respect to the rejection of Claims 1-3 under 35 U.S.C. §103(a) as unpatentable over Härtel and Hitachi, applicant respectfully traverses the rejection.

First, applicant respectfully submits that Härtel is non-analogous art with respect to the present invention. “In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must either be in the field of applicant’s endeavor, or, if not, be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992), see also MPEP §2141.01(a). Härtel is clearly not in applicant’s field of endeavor and does not disclose a solution to the problem of actively damping a member without creating a chattering vibration or sound due to the driving signal of the active damper.

Härtel discloses an engine mount 18 having a U-shaped support center or core 17 connected through elastomer bodies 15, 16 which serves as a support point for a leaf spring 1. It is designed to support a bracket 21 and a fastening point 22 by way of wedge-shaped rubber elements 19 and 20 connected to the support center or core 17. The elastomer support 4 provided in the leaf spring 1 is connected to the engine side by way of metal plate 5 and threaded stud 6 connected to the elastomer support 4.¹

Thus, the engine mount of Härtel is fixed at the engine side by means of the stud 6 and is fixed to the car body side by the fastening point 22. The mechanism is designed to attenuate vibrations by compressive deformation of the elastomer support 4, elastomer bodies 15, 16, rubber elements 19 and 20, and leaf spring 1. The engine mount of Härtel is not composed as a dynamic damper for attenuating vibration input by the resonant action of a mass member and a rubber elastic coupler. Thus, applicant respectfully submits that the claimed invention, an active dynamic damper connected to a single vibration damping object member, is clearly very different from the apparatus disclosed in Härtel, a passive damper connected between two objects, such as an engine and a car frame.

¹ See Härtel, column 4, lines 11-21 and Figure 2.

“A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.” *In re Clay*, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992), see also MPEP §2141.01(a). Applicant submits that the structure and function of the apparatus disclosed by Härtel is very different from the structure and function of the present invention and that the matter with which Härtel deals would not logically commend itself to anyone's attention in considering the above-noted problem of concern.

The claimed invention solved the problem of actively damping a vibration damping object member without creating a chattering vibration or sound due to the driving signal of the active damper. There is no disclosure in Härtel regarding any means to actively damp a member, much less actively damp a member without creating a chattering vibration or sound due to the driving signal. Härtel does not consider the problem solved by the present invention, much less suggest a solution for it. Thus, one skilled in the art would not look to the Härtel reference for guidance in solving the problem solved by the present invention.

Accordingly, applicant respectfully submits that Härtel is non-analogous art with respect to the claimed invention. Use of such non-analogous art is insufficient to present a *prima facie* case of obviousness. See *In re Oetiker* at 1446. See also *In re Clay* at 1061.

Further, applicant submits that the use of Härtel in an obviousness rejection is improper as the combination proposed would change the principle of operation of the cited reference. Härtel teaches a passive damper, where the claimed invention is an active damper. Thus, the combination proposed would change the principle of operation of the cited reference from a passive damper to an active damper. Further, the proposed combination would render one of the studs 6 or 8 superfluous, as only one connection to a vibrating member to be damped is needed for an active damper. Thus, the suggested combination of

references would require a substantial reconstruction and redesign of the elements shown in the primary reference as well as a change in the basic principle under which the primary reference was designed to operate. Accordingly, applicant respectfully submits that the teachings of the cited references are not sufficient to render the claims *prima facie* obvious. See *In re Ratti*, 270 F.2d 810, 813, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959) and MPEP §2143.01.

Assuming *arguendo* that Härtel can properly be used in a §103 rejection, applicant respectfully submits that the required evidence of some reason to select the references for combination, much less motivation to combine reference teachings, is lacking. In this regard, *In re Lee*, 61 USPQ 2d 1430, 1434 (Fed. Cir. 2002) requires the PTO to “explain the reason one of ordinary skill would have been motivated to select the references and to combine them to render the invention obvious” and notes that “conclusory statements,” like the unsupported statement of “a natural evolution of the art” at page 3 of the outstanding action, “do not adequately address the issue of motivation to combine.” Similarly, the above-noted major modifications needed to modify the Härtel passive engine mount into any kind of active damper system contradict the further assertion at page 3 of the outstanding action that one skilled in the art would abandon the Härtel passive system simply to have an active one.

Moreover, even if some valid reason to combine the conflicting reference teachings had been presented, which is not the case, it is clear that the cited references do not teach or suggest all of the elements of Claim 1.

Claim 1 recites an active dynamic damper comprising:

a supporting member having a mounting plate portion; a mass member disposed on a side of a surface of the mounting plate portion such that the mass member is departed from the mounting plate portion; a rubber elastic body connecting portion configured to connect the supporting member with the mass member elastically; and a vibration element configured to vibrate the mass member with a driving force generated by an input of a control pulse signal corresponding to vibration of a

vibration generating source, said mounting plate portion being fixed on a vibration damping object member, wherein said mounting plate portion is fixed on the vibration damping object member through a rubber elastic supporting portion such that said mounting plate portion is departed from said vibration damping object member.

Hitachi discloses a device mounting platform 5 for mounting a device 4 to be protected from vibration, such as a semiconductor device. It is supported on a driving structure 3 by way of a plurality of vertically driving piezoelectric actuators 6 for driving the device mounting platform in the vertical direction, and a plurality of horizontally driving piezoelectric actuators 7 for driving the device mounting platform 5 in the horizontal direction. It is intended to attenuate vibrations of the device mounting platform 5 by driving the piezoelectric actuators 6 and 7 by a controller 11.²

Hitachi teaches that both elastic members 22 and the actuators are connected between table 5 and base stand 3. Thus, applicant respectfully submits that Hitachi does not teach or suggest a mounting plate portion fixed on a vibration damping object member through a rubber elastic supporting portion such that the mounting plate portion is departed from the vibration damping object member, as recited in Claim 1.

As discussed above, Härtel discloses a passive damping engine mount. Härtel teaches that the engine mount is directly connected to two members with studs 6 and 8, respectively.³ Applicant respectfully submits that there is no teaching in Härtel to depart studs 6 or 8 from a member with a rubber elastic supporting portion. Thus, applicant respectfully submits that there is no teaching or suggestion in Härtel for a mounting plate portion fixed on a vibration damping object member through a rubber elastic supporting portion such that the mounting plate portion is departed from the vibration damping object member, as recited in Claim 1.

²See Hitachi, Constitution and Figure 1.

³See Härtel, column 4, lines 11-21 and Figure 2.

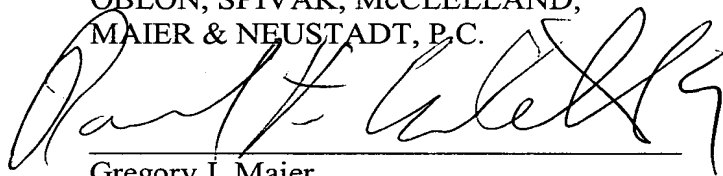
Accordingly, applicant respectfully submits that Hitachi and Härtel do not, alone or in combination, teach or suggest each and every element of Claim 1. Thus, applicant respectfully submits that Claim 1 is patentable thereover.

Claims 2 and 3 are dependent from Claim 1, which applicant believes is patentable over the cited references. Thus, applicant believes Claims 2 and 3 are patentable as well.

Accordingly, the outstanding rejection is traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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